

LIST OF CURRENT CLAIMS

Claims 1-28 (Canceled)

29. (Previously Presented) A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein said insert parts each include a resilient element connected at one end to one end of another resilient element of another insert part, the resilient element being connected at another end to an oblique part configured to extend obliquely into the attachment channel of a side member;

wherein when said insert parts are inserted in an attachment channel, a first side of the oblique part is arranged to be in register with a locking device disposed along an outer surface of the attachment channel and a second side of the oblique part is arranged to be disposed along an inner surface of the attachment channel thereby placing the respective resilient member in tension when inserted into the attachment channel;

wherein the second side of the oblique part is arranged to extend along an attachment channel to a predetermined point located farther away from the connecting end of the insert part than the first side of the oblique part;

wherein the resilient members are arranged to be positioned along the inner surface of an attachment channel;

wherein each of said insert parts includes an end portion geometrically configured in the shape of a triangle having an apex directed along a longitudinal axis of an attachment channel; and

wherein the corner piece includes a plurality of deformable positioning elements extending generally from a region where the connecting ends of the insert parts join.

30. (Currently Amended) A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein each of the insert parts includes a at least one locking element having at least one notch disposed along a surface thereof, said at least one locking element arranged to abut a locking means defined along an outer surface of the attachment channel;

wherein said locking means is a deformable lip projection extending at a predetermined angle from the outer surface of the attachment channel, the lip projection being deformable by the at least one locking element; and

~~wherein the lip projection is selected such that it is sufficiently large so as to compensate for production tolerances, lacquer thicknesses and have a working force on the corner joint that can only be increased by enlarging a deposit surface.~~

31. (Currently Amended) A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein the corner joint is provided with locking means comprising of upset material parts in the shape of a lip projection made by means of slantingly press-in parts of the side members which cooperate with notches defined on the corner piece;

wherein the insert pieces include at least one notch, said notches comprising having at least one of the following characteristics:

~~a triangular shape;~~

a triangular shape defined by one side against which the lip projection is positioned is longer than another side over which a free end of the lip projection is pressed in; and

a shape of a predominantly right-angled triangle, wherein the relation between said one side against which the lip projection is situated and said another side over which a the free end of the lip projection is pressed in is variable by the compression characteristics of the material of the side members;

~~one side of the notches over which a free end of the lip projection is pressed in has a concave bent and/or buckled shape;~~

wherein the one side of the notches over which a the free end of the lip projection is pressed in, on the place where the free end of the lip projection makes contact with the one side extends perpendicular or almost substantially perpendicular to the longitudinal direction of the lip projection; and

~~the notches have a depth of 3 to 4 mm.~~

32. (Currently Amended) A The corner joint according to claim 31, for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured and dimensioned to be received by the mitered end portions of a respective one of the attachment channels of the side members;

~~wherein the corner joint comprises a lip projection of at least one upset material part that is defined by slantingly press-in parts of the attachment channels of the side members, the insert parts including at least one locking element arranged to press the lip projection;~~

wherein said lip projection includes a contact surface disposed at one end thereof which is arranged to cooperate with a contact side of the insert part;

wherein the at least one locking element includes a contact surface geometrically configured to substantially contact the entire length of the lip projection.

33. (Previously Presented) The corner joint according to claim 32, wherein the at least one locking element has at least one of the following characteristics:

the contact surface of the at least one locking element extends in a direction of the deflection of the lip projection;

the contact surface of the at least one locking element is substantially detached from the body of the corner piece;

the at least one locking element is only connected to the corner part at a base

portion thereof;

the insert piece has a framed structure and the at least one locking element is made thicker than the surrounding parts of the framed structure and/or are made equally thick as the total length of the lip projection;

the insert parts of the corner piece are provided with a recess arranged to store any possible material that has been scraped off during the pressing of the lip projection;

the at least one locking element includes a serrated relief along a surface against which the lip projection is pressed, the at least one locking element having a shape such that the formation of any possible cavities under the lip projection is minimized;

the at least one locking element includes a stop surface which is inclined in relation to the longitudinal direction of the accompanying side member and equivalent to the inclination of the lip projection.

34. (Previously Presented) The corner joint according to claim 31, wherein a filling compound is provided at a location near or at the lip projection such that:

the filling compound is either provided under the lip projection so as to fill any cavities under the lip projection;

or the filling compound is provided in the passages around the lip projection so as to be sealed off;

or the filling compound is provided on the lip projection so as to entirely fill up the notch;

or the filling compound provides for a combination of the above-mentioned functions.

35. (Currently Amended). A The corner joint according to claim 29, for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured to be received by the mitered end portions of a respective one of the attachment channels of the side members;

~~wherein each of said insert parts is geometrically configured in the shape of a triangle having an apex directed along a longitudinal axis of an attachment channel; and~~

~~wherein a filling compound is provided in the attachment channel, the triangular shape of each of said insert parts configured to urge the filling compound towards an outer wall of a respective one of said attachment channels.~~

36. (Currently Amended) A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends to define a corner portion and positioned relative to one another at a predetermined angle, each insert part configured ~~and~~ to be received by the mitered end portions of a respective one of the attachment channels of the side members;

~~each of said insert parts includes an end portion geometrically configured in the shape of a triangle having an apex directed along a longitudinal axis of an attachment channel, each insert part defining a first leg arranged to be urged against an inner wall of a respective attachment channel, a second leg connecting at a first end with a first end of the first leg to form the apex and extending at an oblique angle relative to the first leg in a direction generally proximal to the corner portion, and a third leg extending obliquely relative to the first and second legs in a direction~~

generally proximal to the corner portion and connecting to the first leg.

Claim 37 (Canceled)

Claim 38 (Canceled)

39. (Previously Presented) A corner joint according to claim 36, wherein the attachment channels include lip projections arranged along an outer surface thereof and configured to be pressed in a slanting direction relative to the longitudinal axis of a respective one of the attachment channels, said lip projections having at least one of the following characteristics:

a free end of each lip projection being situated behind a central axis of a respective inclined part; and

a longitudinal axis of the third leg of the insert part and the longitudinal axis of the lip projection are canted inwardly towards the inner wall of the attachment channel.

Claim 40 (Canceled)

41. (Previously Presented) The corner joint according to claim 32, wherein said insert parts each include a resilient element connected at one end to one end of a resilient element of the corresponding insert part.

Claim 42 (Canceled)

Claim 43 (Canceled)

Claim 44. (Currently Amended) ~~The A corner joint according to claim 29, for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured to be received by the mitered end portions of a respective one of the attachment channels of the side members;~~

wherein the corner piece and the attachment channels define mutually non-parallel surfaces with the exception of a region wherein a lip projection extending from one side of the attachment channels is urged against a locking element extending from the corner piece.

45. (Previously Presented) A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein each insert part includes a leg extending from the one end of the insert part and arranged to extend into an attachment channel along an inner surface thereof, said insert part including a locking part arranged to lock with an outer surface of the attachment channel; and

wherein a clearance is defined between the outer surface of the attachment channel and the insert part when the corner part is inserted into at least one attachment channel, the clearance generally extending from the locking part to at least the connecting end of the insert part.

46. (Previously Presented) A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein the corner piece is provided with positioning elements arranged to guide the insert parts into the attachment channels when positioned therein; and

wherein the positioning elements include at least one of the following elements:

elastic press-on elements provided to push the inner sides of the insert parts against an inner surface of the attachment channels;

elastically bendable flaps provided on the insert parts at a predetermined distance from the connecting ends thereof and arranged to cooperate with the outer surface of the attachment channels;

support and guiding elements provided on the corner part in the shape of a little leg having elastically bendable flaps arranged to cooperate with the outer surface of the attachment channels.

47. (Currently Amended) A corner joint according to claim 29, for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein the corner piece includes a clearance generally defined at an inside corner where the insert parts connect and having as a hook-shaped profile.

48. (Previously Presented) The corner joint according to claim 29, wherein the insert parts connect to form a unitary corner piece.

49. (Currently Amended) A corner joint according to claim 29, for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein the connecting ends of the insert parts are connected with a hinge, said hinge having a rotational axis positioned near inner walls of said attachment channels.

50. (Previously Presented) A corner joint according to claim 49, wherein each insert part includes a hook-shaped protrusion defined at the connecting end thereof, the hook-shaped protrusion arranged to pivotably connect to a hook-shaped protrusion of another one of said insert parts.

Claim 51 (Canceled)

Claim 52 (Canceled)

53. (Previously Presented) A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured to be received by the mitered end portions of a respective one of the attachment channels of the side members,

the corner joint comprising a locking device including at least one upset material part in the shape of a lip projection defined by slantingly press-in parts of the attachment channels of the side members, each of the insert parts including at least one locking element arranged to press the lip projection,

each lip projection defining a contact surface disposed at one end thereof arranged to cooperate with a contact side of the insert part,

the at least one locking element defining a contact surface geometrically configured to substantially contact the entire length of the lip projection,

each of said insert parts includes an end portion geometrically configured in the shape of a triangle having an apex directed along a longitudinal axis of an attachment channel, a first leg of the triangular shaped insert part arranged to be urged against an inner wall of a respective of one of said attachment channels.

54. (Previously Presented) A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends to define a corner portion and positioned relative to one another at a predetermined angle, each insert part configured and to be received by the mitered end portions of a respective one of the attachment channels of the side members;

each of said insert parts includes an end portion geometrically configured in the shape of a triangle having an apex directed along a longitudinal axis of an attachment channel, each insert part defining a first leg arranged to be urged against an inner wall of a respective attachment channel, a second leg connecting at a first end with a first end of the first leg to form the apex and extending at an oblique angle relative to the first leg in a direction generally proximal to the corner portion, and a third leg extending obliquely relative to the first and second legs in a direction generally proximal to the corner portion and connecting to the first leg, wherein a panel is retained by the frame members by a plurality of wedges in register with a center portion of the second leg.

55. (Previously Presented) A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends to define a corner portion and positioned relative to one another at a predetermined angle, each insert part configured and to be received by the mitered end portions of a respective one of the attachment channels of the side members;

each of said insert parts includes an end portion geometrically configured in the shape of a triangle having an apex directed along a longitudinal axis of an attachment channel, each insert part defining a first leg arranged to be urged against

an inner wall of a respective attachment channel, a second leg connecting at a first end with a first end of the first leg to form the apex and extending at an oblique angle relative to the first leg in a direction generally proximal to the corner portion, and a third leg extending obliquely relative to the first and second legs in a direction generally proximal to the corner portion and connecting to the first leg, wherein a panel is retained by the frame members by a plurality of wedges in register with the second leg, the second leg directed such that an intersection of an extension thereof with an edge of a panel is situated a distance near 10 cm from a corner of the panel.

56. (Previously Presented) A corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends to define a corner portion and positioned relative to one another at a predetermined angle, each insert part configured and to be received by the mitered end portions of a respective one of the attachment channels of the side members;

each of said insert parts including an end portion geometrically configured in the shape of a triangle having an apex directed along a longitudinal axis of an attachment channel, each insert part defining a first leg arranged to be urged against an inner wall of a respective attachment channel, a second leg connecting at a first end with a first end of the first leg to form the apex and extending at an oblique angle relative to the first leg in a direction generally proximal to the corner portion, and a third leg extending obliquely relative to the first and second legs in a direction generally proximal to the corner portion and connecting to the first leg;

wherein each of the insert parts includes a resilient element connected at one end to the end portion thereof and defining one of said connecting ends connecting to a connecting end of a resilient element of a corresponding one of said insert parts, the end portion and the resilient element of each of said insert parts arranged so that the end portion places the resilient member in tension when inserted into one of said

attachment channels.

57. (Previously Presented) The corner joint according to claim 56, wherein the resilient elements are arranged to be positioned generally along the inner surface of the attachment channel.

58. (Currently Amended) ~~A~~ The corner joint for joining two frame side members having attachment channels and mitered end portions, said joint including at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle, each insert part configured to be received by the mitered end portions of a respective one of the attachment channels of the side members;

wherein the connecting ends of the insert parts are connected with a hinge, said hinge having a rotational axis positioned near inner walls of said attachment channels;

wherein each insert part includes a hook-shaped protrusion defined at the connecting end thereof, the hook-shaped protrusion arranged to pivotably connect to a hook-shaped protrusion of a corresponding one of said insert parts.

59. (New) The corner joint according to claim 31, wherein said side of the notches over which the free end of the lip projection is pressed in has a concave bent or buckled shape.